

John C. Stennis Space Center

LAGNIARRE

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To improve life here
To extend life to there
To find life beyond



To understand

and protect our home planet

To explore the universe and search for life To inspire the next generation of explorers ...As only NASA can



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From the Desk of

Bill Parsons Stennis Space Center Director



In a recent all-hands meeting, long-time employee Pat Mooney asked me to assess our performance in the first 100 days of my tenure. In short, we have accomplished a great deal and have many more challenges in front of us.

Focusing on effectiveness, efficiency and customer support — from a programmatic and business management view — the senior management team has crafted an ambitious five-year plan for Stennis. We have taken the initial steps of reorganization. I cannot compliment you enough on your willingness to accept the new challenges of the reorganization. Your recommendations for continued improvement are welcomed.

Along with the NASA and contractor workforce, we have begun the process of identifying requirements to achieve the plan's goals. There is still much to do in this area, and as the new organization develops, this process will continue to develop.

During this first 100 days, some key members of the management team have come on board. Mike Rudolphi joins us from Marshall Space Flight Center as the new deputy director for Stennis, and Miguel Rodriguez joins us from Kennedy Space Center as the new director of the Center Operations Directorate. I have known both these gentlemen for some time and could not be more pleased to have them join our team. I hope each of you gets to know Mike and Miguel in the very near future.

We have also continued to provide outstanding support to the Space Shuttle Program, the Space Launch Initiative (which is now the Orbital Space Plane and the Next-Generation Launch System), and the Earth Science Applications Initiative.

Two other noteworthy areas are the progress we continue to make in the implementation of the Integrated Financial Management Program and our many successes in public and educational outreach.

As I continue to move around the center and speak with you personally, please feel free to share your thoughts about how we have done so far.

Have a safe and wonderful holiday season.



In a spectacular evening launch Nov. 20, the first flight of the Boeing Delta IV family of rockets successfully delivered a commercial telecommunications satellite to orbit. The Delta IV is powered by the Boeing's RS-68 engine, a liquid hydrogenliquid oxygen booster engine that generates 650,000 pounds of thrust. The RS-68 is the first engine both assembled and tested at Stennis Space Center. Boeing also tested the Delta IV Common Booster at Stennis. Supporting a new way of doing business between the government and the private sector, **Boeing signed a Space Act** Agreement with NASA permitting use of the B-1 test stand for testing the RS-68 engine.



NEWSCLIPS

NASA to study cool ice, hot plasma and ocean winds: NASA's launch of three research missions this month will gather information to better understand and protect the Earth. ICESat (Ice, Cloud and Land Elevation Satellite) is the benchmark NASA mission for measuring ice-sheet mass balance. Launching with ICESat is a suitcase-sized satellite called the Cosmic Hot Interstellar Plasma Spectrometer (CHIPS) that will study very hot, very low-density gas in the vast spaces between the stars searching for important clues about the formation and evolution of galaxies. NASA's Earth Science Data and Information System, Goddard Space Flight Center's Wallops Flight Facility, Wallops Island, Va., manages both projects. The third mission launched, SeaWinds, is NASA's latest Earthmonitoring instrument for measuring the speed and direction of winds over Earth's oceans. The SeaWinds instrument will provide a critical tool for improving weather forecasting, detecting and monitoring severe marine storms, identifying subtle changes in the global climate and better understanding global weather abnormalities, such as El Niño and La Niña. The Jet Propulsion Laboratory, Pasadena, Calif., manages SeaWinds.

The Wright stuff kicks off: NASA and the U.S. Centennial of Flight Commission kicked off the yearlong "Centennial of

Flight: Born of Dreams — Inspired by Freedom' on Dec. 17. The celebration is in honor of the 99th anniversary of the Wright brothers' first powered flight. As an official partner of the U.S. Centennial of Flight Commission, NASA

plans various celebratory activities during 2003 to commemorate the Wright brothers' first powered flight on the sands of Kitty Hawk, N.C., and to increase awareness about flight-related achievements.

NASA know-how will reduce automotive emis-

sions: NASA's laser technology may soon be part of your car's exhaust system. Originally designed for satellites to measure the chemical makeup of the Earth's atmosphere, Low-Temperature Oxidation Catalysts will soon be available for commercial use. Developed at NASA's Langley Research Center in Hampton, Va., the technology

is expected to reduce automotive pollution emis-

sions by approximately 30 percent and the cost of after-market catalytic converters by 25 percent. Most modern catalytic converters require the exhaust to reach a high temperature before the catalytic converter begins to work. The NASA catalyst begins to work almost immediately, enabling destruction of toxic gases even when the catalytic converter is cold.

Space Flight Awareness We Have Friends In High Places

NASA's educator astronaut assigned first flight

NASA Administrator Sean O'Keefe announced Dec. 12 that Barbara Morgan, the Agency's first educator astronaut, has been assigned as a crewmember on a November 2003 Space Shuttle mission to the International Space Station.

Morgan's assignment fulfills O'Keefe's com-

mitment earlier this year to send an educator into space in a renewed mission to inspire a new generation of explorers. Morgan's flight represents the first of what is expected to be many flights as part of the new Educator Astronaut Program, which will be unveiled in early 2003.



Barbara Morgan

"NASA has a responsibility to cultivate a new generation of scientists and engineers," said O'Keefe. "Education has always been a part of NASA's mission, but we have renewed our commitment to get students excited about science and mathematics. The Educator Astronaut Program will use our unique position in space to help advance our nation's education goals," he said.

For more than a year, Morgan has served as a spacecraft communicator in Mission Control at NASA's Johnson Space Center in Houston.

Cmdr. Scott Kelly will lead the six-member STS-118 crew. Lt. Col. Charles Hobaugh will serve as the Space Shuttle's pilot. Veteran NASA astronaut Dr. Scott Parazynski will be making his fifth space flight. The Canadian Space Agency's Dr. David Williams will return to space for a second time, and Cmdr. Lisa Nowak will, like Morgan, make her first flight into space.

"Barbara's commitment and dedication to education is an inspiration to teachers across the country," O'Keefe said. "She embodies the spirit and desire of this agency to get students excited about space again, and I'm pleased that she'll be able to fulfill that mission from orbit aboard the Space Shuttle and the International Space Station," he said.



NASA's Jeff Lott, right, was presented with the astronaut corps' own personal achievement award, the Silver Snoopy, on Dec. 13 by astronaut Lt. Col. Lee Joseph Archambault. The Silver **Snoopy Award recognizes** individuals for professional dedication and outstanding support that greatly enhances flight safety and mission success in the Space Shuttle program.

NASA Administrator Sean O'Keefe briefed all NASA centers on the One NASA initiative Dec. 11 in a special edition of NASA Update live on NASA Television. One NASA is designed to create a culture and set of practices that facilitate business efficiencies and focus on teamwork and collaboration among all NASA centers. Following the broadcast that included a question and answer session, Stennis Space Center Director Bill Parsons, left, reviews One NASA materials with Rebecca Strecker of the **NASA Public Affairs Office at** Stennis. For more information, visit the One NASA Web site at www.onenasa.nasa.gov.



Rodriguez named director, Center Operations Directorate

Miguel Rodriguez, former chief of the Integration Office of the Cape Canaveral Spaceport Management Office (CCSMO), Cape Canaveral Air Force Station, Fla., has joined Stennis Space Center's senior management team as the director of Center Operations.

Rodriguez joined NASA in 1976 as a mechanical design engineer at Marshall Space Flight Center, Huntsville, Ala. In 1978, he transferred to Kennedy Space Center, Fla., where he held several key positions in which he was responsible for preparing facilities for processing Space Shuttle payloads. Since 1990, he has managed various areas such as experiment integration, project engineering and operations.

Prior to being named chief of the CCSMO, Rodriguez served as chief, Space Station Re-supply/ Return and Space Shuttle Payloads Division.

Rodriguez was born in Santurce, Puerto Rico, and is a graduate of the



Miguel Rodriguez

Colegio del Espiritu Santo, Hato Rey, Puerto Rico. He earned a bachelor's degree in mechanical engineering from the University of Puerto Rico. He is completing a master's degree in engineering management at the University of Central Florida.

New leadership, one vision

Stennis ready to respond to new challenges

Stennis Space Center's changes in leadership and management structure in the final months of the year put the center in position to respond to NASA's plans for the future.

Management Changes

NASA's Bill Parsons, former director of Stennis' Center Operations and Support Directorate, was named center director in August. NASA's Michael Rudolphi, former manager of the Reusable Solid Rocket Motor Project at Marshall Space Flight Center, Huntsville, Ala., joined Stennis as deputy center director in November. NASA's Dr. David Powe was named director of the Earth Science Applications Directorate, also in November. NASA's Miguel Rodriguez, who served as chief of the Integration Office of the Cape Canaveral Spaceport Management Office, Cape Canaveral Air Force Station, Fla., moved to Stennis in December to serve as director of the Center Operations Directorate.

These appointments reflect NASA Administrator Sean O'Keefe's newly announced One NASA approach to program management. O'Keefe has emphasized an organization that focuses on better coordination, collaboration and communication among all Agency centers to reach common goals.

"These personnel moves enhance the working relationship Stennis has with other centers," said Parsons. "Stennis' management reorganization was a team effort that will greatly improve our flexibility in working within the One NASA concept."

New Business

Stennis' growth over the past four years has had a pronounced impact on its neighboring communities. Release of the center's economic impact figures in March showed that Stennis accounted for more than 28,000 jobs in the local area, increased personal income by \$928 million and increased retail sales by \$371 million. It is estimat-



■ Participating in the ribbon-cutting ceremony of the Lockheed Martin Mississippi Space and Technology Center on Aug. 5 were, from left, Rocky Pullman, president, Hancock County Board of Supervisors; U.S. Sen. Trent Lott; Dr. Vance Coffman, chairman and chief executive officer, Lockheed Martin Corp.; Mississippi Gov. Ronnie Musgrove; and NASA Administrator Sean O'Keefe.



▲ The best show in town. Stennis, in collaboration with Marshall Space Flight Center, Huntsville, Ala., streamed its first Space Shuttle Main Engine test live on the Web.

ed that Stennis generated \$100 million in local government tax rev-

Stennis marked another milestone in August through its efforts to position the center as a viable location for a multitude of commercial and governmental agencies. Ribbon cutting ceremonies for three facilities, valued at more than \$60 million, were held Aug. 5.

Lockheed Martin opened the doors to its \$30-million, 220,000square-foot Lockheed Martin Mississippi Space and Technology Center. The Naval Small Craft Instructional and Technical Training School and Special Boat Unit 22 opened its long-awaited \$26-million training facility, and the Naval Oceanographic Office opened its 24,000-square-foot, \$6.5 million Warfighting Support and Survey Operations Center.

More than 70 aerospace industry leaders from across the nation visited Stennis in April for Customer Day 2002. The two-day event showcased the center's unique rocket engine test capabilities, allowing propulsion test engineers to have face-to-face meetings with customers.

The Earth Science Applications (ESA) Directorate assumed oversight of the Stennis magnetometry



▲ Boeing Test Conductor Jim Dingman, left, hands NASA Administrator Sean O'Keefe, right, headphones to listen to the countdown to a Space Shuttle Main Engine test during the Administrator's first visit to Stennis.

facility, formerly managed by the Naval Research Laboratory. The addition of the facility, along with the adjacent gravitation calibration site, strengthens ESA's role in the area of sensor validation and verification.

Propulsion

In March, Robert Lightfoot was named director of the Propulsion Test Directorate (PTD).

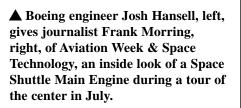
Stennis engineers and technicians were critically involved in resolving issues related to the small cracks found last June in each orbiter's hydrogen fuel flow liners. Engineers developed a flow liner simulator to determine whether the hydrogen lines can sustain 20 more years of shuttle flight operations without being replaced.

PTD's role in support of NASA



ing, of Stennis' Earth Science Applications
Directorate, and fellow NASA employees
work to create a digital vision of Gainesville.
They are testing non-invasive technology for
conducting archaeological research and
applying what they learn to cultural
resource management.

NASA's Dr. Marco Giardino, kneel-



initiatives found the center supporting one of the most ambitious testing schedules in recent years.

The E-Complex, with its three test stands and seven testing cells, carved out a new reputation as it met program requirements with unprecedented results.

The Boeing/Rocketdyne Advanced Catalyst Bed concluded a series of 249 tests over a 26-day period. Activation tests of the Integrated Powerhead Demonstrator (IPD) were completed in June.

The launch of STS-110 marked a milestone for NASA and for Stennis. The flight was the first to use a full complement of the Block II configuration of the Space Shuttle Main Engine. The new engine features fewer welds, stronger internal shafts and disks and more robust bearings that make the system safer and more reliable.

Earth Science Applications

The Stennis Earth Science
Applications (ESA) Directorate
assumed a new mission to optimize
benefits from NASA's Earth
Science investments through systems engineering to advance decision support tools that serve the
nation. ESA provides for cross-cutting responsibilities in systems
engineering, workforce development and affiliated research centers, and takes the lead in the 12
national applications in the following areas: agricultural competitive-

ness, community growth, coastal management and homeland security.

ESA is collaborating with the NASA Earth Science Enterprise Applications Program, other NASA centers and multiple federal agencies in working to enhance decision-support systems.

ESA scientists used satellite technology to help efforts to preserve the Louisiana wetlands, evaluate urban sprawl, research cultural resource management, plan a city's tricentennial and look deep into muddy waters.

Stennis announced support of the Rapid Syndrome Validation Project (RSVP), a real-time syndrome-monitoring system developed by Sandier National Laboratories, Albuquerque, N.M., in February. The program is expected to enhance a reporting system that allows health-care professionals to recognize and react swiftly to biological threats.

Technology Development and **Transfer**

The Dual Use Technology Development Program continued to expand its innovative approach of mutually beneficial teaming with commercial industry. One of the most successful projects was with

➤ Students at East Oktibbeha
Upper Elementary School in
Starkville examine a replica of a
NASA space suit. NASA officials traveled to the school to
reward students for raising test
scores. The school received a
plaque to honor their achievement and were treated to a
Living and Working in Space
presentation.

BAFCO Inc., which resulted in the production of an improved linear actuator for use on critical valves used in rocket engine testing. Through these innovations, Stennis purchased a substantial number of valves, at a cost savings of over \$250,000, delivered in half the time.

Additionally, the Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) programs continued to produce positive results. A milestone was reached when Duncan Technologies, which first developed the hydrogen flame imager through a Stennis SBIR project, announced reaching \$1 million in commercial sales of the NASA-based technology.

Education

The Office of Education recorded many successes this year,

■ This high-resolution satellite image (Terra/MODIS) shows sediments from the Mississippi River spilling into the Gulf of Mexico. Lake Pontchartrain lies near the center of the photo.



including the development of the Mississippi Education Involvement (MSEI). The NASA Office of Education supports the efforts of educational stakeholders to create a cohesive education plan for the state through MSEI and its comprehensive inventory project. The inventory is an online database allowing the community to share knowledge of educational resources.

Stennis National Workforce Development Education and Training Initiative team members developed a competency model, allowing those in the geospatial sciences industry to communicate their workforce needs to educators.

The Office of Education conducted more than 60 Educator

See **YEAR END** Page 7

Stennis SBIR project improves geospatial information techniques

Software developed under the NASA Small Business Innovation Research (SBIR) Program at Stennis Space Center is changing the way scientists gather geospatial information from digital imagery to help us better understand and protect our home planet.

Feature Analyst is a software extension developed by Visual Learning Systems Inc. (VLS), Missoula, Mont., for geographic information systems (GIS) and image processing software. Feature Analyst is sophisticated computer software that can find features of interest in digital imagery. The software translates the characteristics of multispectral, or many-colored, image data into understandable spatial patterns that scientists and image analysts can interpret. It was developed in response to NASA's critical need to accelerate and automate the interpretation of digital remotely sensed data to support its Earth Science Enterprise mission. Remotely sensed data, information about the Earth collected from distant vantage points, includes satellite imagery.

Feature Analyst uses machine learning techniques to rapidly recognize and analyze the color subtleties in digital imagery. The analyst can extract specific features such as roads, buildings, bridges and vegetation. This approach has demonstrated greater accuracy than traditional image processing techniques and may also decrease the costs of extracting information from imagery to support GIS applications.

In addition to various commercial uses, other primary markets for Feature Analyst include the U.S. Department of Defense, the Department of Homeland Security, the United States Department of

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The blue markings in this image identify the unique shapes and colors of buildings and their roofing materials differentiated from other structures such as vegetation and pavement. The Feature Analyst decision support system, developed by Visual Learning Systems Inc. of Missoula, Mont., through NASA's Office of Technology Development and Transfer at Stennis Space Center, translates the characteristics of multispectral, or many-colored, image data into understandable spatial patterns that scientists and image analysts can interpret. Feature Analyst has demonstrated greater accuracy than traditional image processing techniques and may also decrease costs.

NASA engineer Mark Moody finds diversity strengthens opportunities to expand boundaries

NASA's Mark Moody, a staff engineer in the Propulsion Test Program Office, credits his parents with helping him appreciate diversity. He praises Stennis Space Center for seeking diversity to strengthen its role within NASA and its working community.

"My parents were instrumental in providing me with exposure to a variety of people from diverse backgrounds and cultures," said Moody. His mother, now retired, worked as a registered nurse in a hospital and in a public school system. His late father was a retired Army colonel and civil servant in the U.S. Department of Labor. "Being provided with a broad exposure while growing up contributed to my understanding that my possibilities weren't limited to the boundaries of my own back yard."

Moody came to Stennis as a combustion devices engineer for the Rocketdyne Division of Rockwell International in 1988 from the Michoud Assembly Facility in New Orleans, where he spent three years working as a tool design engineer for Martin Marietta on the Space Shuttle External Tank Program. He joined NASA at Stennis in 1994 and was initially assigned to the Office of Safety and Mission Assurance. Currently, he works in the Propulsion Test Program Office within the Program Integration Office.

"Over the last 14 years, I have seen Stennis grow both in its tasks and responsibilities to NASA and in its role as a federal community," he said. "Stennis has successfully assumed

increasing responsibilities in the propulsion test arena. We've done this by upgrading and expanding test facilities, limiting duplication and attracting new talent and new programs. The real estate here looks really different than it did in 1988."

Moody said another way Stennis has grown is by adding to the number of civil servants employed. "We have a good mix of people with diverse backgrounds and experience," he said. "It's been good for Stennis. The diversity of our workforce has expanded Stennis' boundaries and has made almost anything possible."

Born in New Orleans, Moody received his bachelor's degree in mechanical engineering from Southern University in Baton Rouge, La., and a master's degree in management from Florida Institute of Technology, Melbourne,



serves as board sec-

retary for the National Rocket Propulsion Test Alliance, which is an alliance between NASA and the Department of Defense.

"The alliance is the most active of six NASA/DOD coalitions and was formed to shape the government's rocket propulsion test capability to efficiently meet national test needs," said NASA's Mike Dawson, manager

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Representatives from the Office of Occupational Health at NASA Headquarters were at Stennis Space Center on Dec. 5 as part of the office's bi-annual review and assessment of facilities. From left, Cathy Angotti, director, Office of Occupational Health, NASA Headquarters; Alan Gettleman and Dr. William Barry, both of Kennedy Space Center; and NASA's Deputy Chief Health and Medical Officer Dr. Richard Williams toured the center.

DIVERSITY...

(Continued from Page 6)

of the Program Integration Office at Stennis. "This is done by sharing people, equipment and processes through intra- and interagency cooperation. Mark is engaged in NASA and DOD program development, design and tests in support of Stennis' Propulsion Test Program Office. Mark is helping us lead the Agency's and nation's rocket test activity."

In addition to his work with the alliance, Moody serves as the Propulsion Test Program Office liaison engineer to Marshall Space Flight Center and is responsible for interfacing with test personnel at both centers.

Moody is married to the former Lynette Muckelroy, a computer science teacher. They have three children: Jaime, 17; Shari, 15; and Jonathan, 10. Moody is a major in the Louisiana Army National Guard, where he serves as an executive officer for an engineer battalion. He is cubmaster of Jonathan's scout pack.

YEAR END. . .

(Continued from Page 5)

Resource Center and distance education workshops for educators and students, implementing return on investment training as a tool for evaluating programs.

Additionally, the office sponsored more than 50 students and faculty for internships, as well as sponsoring successful FIRST Robotics teams and the NASA Student Involvement Program's National Symposium.

StenniSphere

The visitor center reopened its doors to the public in January after being closed due to the events of Sept. 11, 2001. Soon after reopening, StenniSphere was the first stop on a national tour of a traveling exhibit of the **International Space** Station. New exhibits, anniversary celebrations and outreach efforts, including the second public evening engine test, highlighted Stenni-Sphere's 2002 calendar.

Celebration of the 32nd anniversary of Apollo 13's flight into history brought guests and dignitaries to honor Apollo 13 astronaut and native Mississippian Fred Haise in April. An exhibit recognizing the contributions of space pioneer Werner von Braun also opened in April.

StenniSphere took its show on the road in a joint venture with Entergy's IMAX Theater in New Orleans. More than 500,000 visitors viewed exhibits from Stennis while attending presentations of the International Space Station 3-D movie.

Stennis once again opened its doors for a public evening engine test, drawing more than 5,000 visitors to witness the shake, rattle and roar of a Space Shuttle Main Engine. For the first time, in collaboration with Marshall Space Flight Center, streaming video of the test was shown live on the Web.

NASA negotiates contracts for innovative small business projects

NASA recently selected research proposals for negotiation of Phase I contract awards through NASA's 2002 Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs administered through Stennis Space Center's Office of Technology Development and Transfer.

SBIR and STTR goals are to stimulate technological innovation, increase the use of small business (including women-owned and disadvantaged firms) in meeting federal research and development needs, and increase private sector commercialization of results of federally funded research.

The selected firms will be awarded fixed-price contracts valued up to \$100,000 each for a one-year STTR contract and \$70,000 each for a sixmonth SBIR contract to perform Phase I feasibility studies.

Companies that successfully complete the Phase I activities are eligible to compete for Phase II selection the following year. The Phase II award allows for a two-year, fixed-price contract of up to \$600,000 for SBIRs and \$500,000 for STTRs.

Stennis' Office of Technology Development and Transfer will administer the following proposals for negotiation:

Technological Services Co., Clinton, Miss., Improving Test Operations Through Scalable Video Processing on Computer Clusters (SBIR);

NVision Solutions Inc., Stennis Space Center, Miss., BasinTools Module 1, Online Remote Sensing Interface (SBIR);

Seagull Technology Inc., Campbell, Calif., Next-Generation, Low-Cost, Direct Geo-referencing of Aerial Images (SBIR);

Opto-Knowledge Systems Inc. (OKSI), Torrance, Calif., Universal Stabilized Platform for Hyperspectral Sensors (SBIR);

Intelligent Automation Inc., Rockville, Md., Ultra Wide Band Water Sensor; and Principal Component Analysis for Feature Extraction from One-Dimensional Signals (SBIR);

NVE Corp., Eden Prairie, Minn., Miniature Intelligent Sensor Electronics (SBIR);

Combustion Research and Flow Technology Inc., Dublin, Penn., Advanced Flow Analyses in Complex Feed Systems (SBIR);

SMH Consulting, Alexandria, Va., Automated, Universal Software for Cloud and Cloud Shadow Detection in Remote Sensing Data (SBIR);

Invocon Inc., Conroe, Texas,

Wireless Ethernet-based Data Acquisition System (SBIR);

Larson Davis Inc., Provo, Utah/Brigham Young University, Provo, Utah, Energy-Based Acoustic Measurement Techniques and Sensors (STTR);

Omni Technologies Inc., New Orleans, La./Louisiana State University, Baton Rouge, La., Non-Intrusive Continuous Wave Acoustic Flowmeter (STTR);

Orbital Technologies Corp., Madison, Wis./University of Wisconsin - Madison, Madison, Wis. Wavelength - Agile Optical Rocket Propulsion Sensor (STTR); and

Sierra Engineering Inc., Carson City, Nev./Cal Poly State University Foundation, San Luis Obispo, Calif., Non-Axisymmetric Infrared Plume Tomography for Rocket Plume Species and Temperature Distributions (STTR).





Keep safe during the holidays

Here are a few tips to keep your holiday season free from accidents and injuries:

Christmas Trees

- Purchase green, moist Christmas trees, never old or brittle. Check the needles. Try to find a tree with needles that bend instead of break.
- After purchasing a live tree, cut the tree trunk to expose new wood that will be able to soak up water. Always keep live trees watered.
- Keep trees (and any other combustibles) away from ignition sources such as fireplaces, space heaters, candles, overhead lights and radiators.
- Ensure that artificial trees are fire-resistant and UL- (Underwriters Laboratory) or FM- (Factory Mutual) listed.

Christmas Lights and Extension Cords

- Use only UL- or FM-approved extension cords.
- Make sure the extension cord is large enough to carry the intended load.
- Do not overload outlets. Use surge protectors if multiple outlets are needed.
- Immediately replace any broken bulbs that have exposed filaments.
- Never use electric lights on metal trees.

Toys and Ornaments

- Purchase toys for the appropriate age level. Toys designed for older children might be dangerous for younger children.
- Toys with sharp points, sharp edges, strings, cords or parts small enough to be swallowed should not be given to small children.
- Place older ornaments and decorations that might be painted with lead paint out of the reach of children and pets.

QUICKLOOK

- For more than 20 years the Stennis Christmas Drive has helped care for the needs of residents in Hancock, Harrison and Pearl River counties in Mississippi and St. Tammany Parish in Louisiana. The 2002 drive is well under way. Representatives are needed to coordinate efforts by participating agencies and contractors. Organizers plan to distribute gift boxes beginning at 11 a.m., today, Dec. 19. Call Boeing's Joyce Lawrence at ext. 8-2195 for additional information.
- The Stennis Wellness Center is offering a holiday membership special between now and Dec. 31. The \$25 instatement or reinstatement fees will be waived, and only the \$15 membership dues will be charged for the month of December. Interested employees who have never been members should contact or visit the Wellness Center to schedule a fitness assessment. Returning members can arrange reinstatement upon their first return visit. For information, call the Wellness Center at ext. 8-3950.
- Make sure you get the "Right Stuff" for those on your last-minute shopping list. Check out the gifts at the NASA Exchange and the Space Odyssey Gift Shop.
- The NASA Speaker's Bureau Program at Stennis is made up of volunteer scientists, engineers and other employees available for lectures and presentations along the Mississippi Gulf Coast and throughout southeast Louisiana. For information or to volunteer, contact Jeanie Maxwell at ext. 8-1032 or visit www.ssc.nasa.gov/public/speaker/.
- **Improve communication and leadership** skills in a fun environment by joining the Speakeasy Toastmasters. The club is open to all Stennis employees and contractors. Meetings are 11:30 a.m. to 12:30 p.m. the first and third Thursday of each month in the NASA Conference Center. For details, call Dan Hultgren at ext. 8-3452.

SBIR...

(Continued from Page 6)

Agriculture Forest Service and NASA. These agencies require timely, accurate and relevant GIS data to support intelligence, defense and emergency planning operations, and local government GIS development.

"Commercial users, as well as state, local, regional and tribal government planning agencies, will benefit from Feature Analyst's capabilities in various geospatial information requirements, such as forestry, agriculture, infrastructure planning, urban zoning and environmental planning operations," said NASA's Bill Graham of the Earth Science Applications Directorate at Stennis and technical representative for the program.

The SBIR Program provides small businesses with federal funds for conducting research and development.

"The SBIR Program was a natural outlet for VLS to pursue federal grant opportunities to drive the Feature Analyst technology into the commercial GIS market. The need is there for users wanting a powerful and easy-to-use tool for extracting features from digital imagery," said Stuart Blundell, chief operating officer, VLS.

The SBIR Program at Stennis Space Center is managed by the Office of Technology Development and Transfer. For more information, contact Ray Bryant at ext. 8-1929 or visit http://technology.ssc.nasa.gov.

LAGNIAPPE

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National Aeronautics and Space Administration

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